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MEMORANDUM

Subject: Transmittal of RCRA Facility Assessment Evaluation

From: Erlece P. Allen, Chief
Technical Section (6H-CT)

To: William K. Honker, Chief
Permit Section (6H-CP)

Attached please find a copy of the following RCRA Facility Assessment Evaluation:

- Facility Name: Total Refinery
- EPA ID Number: OKD057705972

Please advise us if more information is required and/or if you need further assistance.

Attachment

cc: Sam Becker (6H-C)

bcc: B. Taylor (6H-CE)
G. Reiter (6H-HO)
M. McKee (6H-ES)

Total Petroleum Corp (Vickers Petroleum)
OKD057705972

SUPERFUND FILE

OCT 22 1992

REORGANIZED

6H-CT:

9532478

RCRA FACILITY ASSESSMENT EVALUATION

PRELIMINARY REVIEW AND VISUAL SITE INSPECTION

(NO SAMPLING VISIT)

Region VI, Technical Compliance Section

FACILITY'S NAME(S): Total Petroleum Refinery

EPA ID NUMBER: OKD057705972

ADDRESS: P.O. Box 188 Ardmore, Oklahoma 73402

LOCATION: The refinery is located approximately two miles northeast of Ardmore, Oklahoma

DATE OF INSPECTION: April 28, 1987

SITE DESCRIPTION: Petroleum Refinery

PREPARED BY: Black and Veatch DATE PREPARED: July 17, 1987

REVIEWED BY: Jon Rinehart DATE REVIEWED: December 9, 1987

ANTICIPATED PERMIT DATE: 9/30/88

ANY ON-GOING STATE/FED 264, 265, or 270 CORRECTIVE ACTION OR CERCLA ACTION: On 2-4-87 on administrative order was issued by the State concerning 264 violations. They are now in compliance.

DOES FACILITY HAVE A CERCLA FILE? YES X NO ____

Was a CERCLA PA/SI performed at this facility: A CERCLA SI was performed at this facility on 9/80/.

DOES FACILITY HAVE UIC WELL? YES ____ NO X

TYPE OF DRINKING WATER SUPPLY WITHIN A 3-MILE RADIUS: There is apparently no drinking water taken from the groundwater. The source is probably a river or reservoir, but it was not specifically stated in the RFA.

TARGET POPULATION WITHIN A 3-MILE RADIUS: The city of Ardmore is within a 3 mile radius of this facility and its population is 31,189 as of 1980 consus.

Total Petroleum Corp (Vickers Petroleum)

OKD057705972

RECOMMENDATIONS: ____ S.V. X R.F.I. ____ I.M. ____ No Further Action under RFA

(Indicate only one unless I.N. is marked)

X 3004(u) ____ 3007

Possible Enforcement Action: ____ 3008(a) ____ 3008(h)

SUPERFUND FILE

OCT 22 1992

REORGANIZED

I. Preliminary Review of Prior or Continuing Releases of Solid Waste Management Units (SWMU)

A. Evaluation of Information

1. The main purpose is to determine whether there has been or may have been a release(s) of hazardous waste or hazardous constituents from any SWMUs which will require corrective action measures under Section 3004(u) of the RCRA Hazardous and Solid Waste Amendments (HSWA) of 1984. The SWMUs of concern are:

a) SWMUs not regulated under RCRA; and

b) SWMUs regulated under RCRA regardless of whether they are subject to ground water monitoring requirements.

2. The purpose of this review is to:

a) Identify all SWMU;

b) Identify if there have been prior or continuing releases of hazardous wastes or hazardous constituents from such units to any media (air, surface water, ground water, soil & sub-surface gas);

c) Determine if such releases caused environmental contamination that would require corrective action; and

d) Determine what additional information or investigation is needed to clarify whether there has been a release or if a potential for a release exists.

II. Visual Site Inspection

A. Purpose

* Verify PR Information

* Identify additional releases

* Assess Condition of Solid Waste Management Units (SWMU)

* Determine Sampling Locations for a Sampling Visit when applicable

B. NUMBER OF SWMU INVESTIGATED DURING THE PR/VSI: 43
(34 SWMUs & 9 AOC)

	LIST OF SWMU	REGULATED BY RCRA* (SUBTITLE C)	STATUS**	SUBJECT TO GWM*** SUBPART F
1)	Land Treatment Unit	Yes	A	Yes
2)	Landfill, Inactive	No	I	No
3)	Caustic Ponds (2)	Yes	I,A	No
4)	API Separator	No	A	No
5)	Induced Air Flotation Unit	No	A	No
6-11)	Surface Impoundments (6)	Yes	A	No
12-34)	Biotreatment Ponds (23)	Yes	A	No
	AREAS OF CONCERN			
35)	Slop Oil Recovery System	No	A	No
36)	Weathering Beds	Yes	A	No
37)	Large Area of Dead Vegetation and Trees	No	A	No
38)	Heat Exchanger Bundle Cleaning Area	No	A	No
39)	Lift Station (Storm Water Collection Basin)	No	A	No
40)	East Storm Water Pond	No	A	No
41)	Fire Training Area	No	A	No
42)	Neutralization Basin	No	A	No
43)	Catalyst Landfill	Yes	A	Yes

** Active, Inactive, or Closed (A, I or C)
*** GWM-Groundwater Monitoring

C. NUMBER SWMU TO BE INCLUDED IN THE RFI: 41

LIST OF SWMU	RATIONALE
1) Inactive Landfill (SWMU #2)	Evidence of improper disposal of bulk sludges and catalysts were cited in EPA inspection reports from 1980 and 1984. This landfill was operated prior to 1981. The landfill received spent catalysts, construction wastes. It was also noted there was extreme erosion along a steep side slope at the landfill. The reported erosion and exposed wastes at the landfill indicate that hazardous constituents might have become mixed with runoff water and transported

LIST OF SWMU	RATIONALE
	to the collection pond, since this water discharges to Sand Creek, there is a potential for releases of hazardous constituents from the landfill to surface water.
2) Caustic Ponds (2) (SWMU #3)	These impoundments were used to dispose of spent caustics and acid wastes from refinery process units.
3) API Separator (SWMU #4)	This separator is an open concrete vessel placed below grade. Sludge contained in this unit is considered hazardous (K051).
4) Induced Air Flotation Unit (SWMU #5)	Effluent from the API Separator is pumped to the IAF unit, which is a steel tank. It appears that there may have been releases of wastewater from the IAF unit to soils beneath the unit based on staining on the vessel.
5-10) Surface Impoundments (6) (SWMU #6-11)	File information indicated that prior to 1981, a series of pits was used to store oily wastes such as API Separator Sludge and leaded tank bottoms. These pits were cleaned out and the contents of the pits were land farmed in 1981. These impoundments were unlined.
11-33) Biotreatment Ponds (23) (SWMU #12-34)	Before 1981 a series of pits had been used to store oily wastes, including API Separator Sludge (K049) and leaded gasoline storage tank bottoms (K051). These ponds are unlined. Information on geologic and hydrogeologic characteristics of the areas underlying the surface impoundments and biotreatment ponds is needed before the potential for releases from these units to groundwater may be evaluated.

LIST OF SWMU	RATIONALE
34) Slop Oil Recovery System (SWMU #35)	Tank 815 may have overflowed in the past, since the side of this tank appeared stained.
35) Weathering Beds (SWMU #36)	A 1980 EPA inspection report stated that control of surface runoff from within the leaded gasoline storage tank containment dikes "was not good" and that on unvalved pipes extending through the containment dike was discharging wastewater from inside the dike to Sand Creek.
36) Large Area of Dead Vegetation and Trees (SWMU #37)	The area is located just north of the caustic ponds west of (downslope) the inactive landfill, and south of the land treatment unit. It is possible that release, of hazardous constituents from any or all of these units caused damage to vegetation, due to the proximity to the caustic ponds, the inactive landfill and the treatment unit.
37) Heat Exchanger Bundle Cleaning Area (SWMU # 38)	The heat exchanger bundles are cleaned on a cracked concrete pad on the south side of the main process area. At the time of the April 1987 VSI, the cleaning area was covered with large chunks of reddish-brown scale and the concrete pad was stained with reddish-brown material. This primary concern at this area is the production of a listed waste, heat exchanger bundle cleaning sludge (K050). This waste is listed due to the presence of hexavalent chromium.

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LIST OF SWMU	RATIONALE
38) Lift Station (Storm Water Collection Basin) (SWMU #39)	During the April 1987 VSI at Total, the basin was full of reddish-brown liquid, which floated on the surface of the water. The facility representative did not know what was this material was but he thought it contained iron.
39) East Storm Water Pond (SWMU #40)	An oily film was present on the water surface, and portions of the bank are oil stained. Since this is an unlined pond, there is the potential for release of wastewater from this pond to soil, groundwater, and subsurface gas.
40) Fire Training Area (SWMU #41)	The fire training area has an uncontained gravel surface, there is potential for release of fuels used in fire-fighting exercises to soil, groundwater, and air. Diesel fuel is ignited in a number of old process vessels.
41) Neutralization Basin (SWMU #42)	The neutralization basin is a below grade covered concrete vessel located within the process area, waste hydrofluoric acid and tar wastes from the neutralization basin may have been released to soils, groundwater, and subsurface gases and cannot be evaluated because the structural conditions of the basin itself was unable to be inspected since the unit is below grade.

D. NUMBER OF SWMU WITH NO INDICATED RELEASES: 0
(Documentation is necessary for a SWMU to be included in this category.)

E. SUPPLEMENTAL INFORMATION ON RCRA REGULATED UNITS: 2
(Describe any problems identified or suspected from regulated units including identified releases to groundwater)

LIST OF SWMU	CONCERNS
1) Land Treatment Units (SWMU #1)	Total has indicated that the groundwater monitoring system currently in place at the land treatment unit does not have an adequate number of appropriately located background wells to allow complete monitoring of the complex hydrogeologic strata at the unit. The facility area is located on the southeast limb of the Caddo Anticline.
2) Catalyst Landfill (SWMU #5)	Monitoring Well MW-2 was dry through 100 feet of depth, and when water samples and elevations were taken in February 1983, this well was still dry. EP toxicity tests on the spent catalyst have been shown the material to be non-hazardous. However, according to the landfill permit issued by the OSDH, Total is required to monitor groundwater on a quarterly basis from at least three monitoring wells. It appears because MW-2 is dry and that the requirements of the permit are not being fulfilled.

II. FINDINGS

A. RECOMMENDATIONS

The contractor recommends that the Land Treatment Unit*, Caustic Ponds, Surface Impoundments and Biotreatment Ponds, a Large Area of Dead Vegetation and Trees, which is north of the Caustic Ponds, west of the Inactive Landfill and south of the Land Treatment Unit and the Heat Exchanger Bundle Cleaning Area, should all be included in an RFI.

EPA agrees with the recommendations brought forth by the contractor however, in addition the inactive landfill, API Separator, Induced Air Flotation Unit, Slop Oil Recovery System, Lift Station (Storm Water Collection Basin) East Storm Water Pond, Fire Training Area, Neutralization Basin needs to be included in the RFI.

B. Comments

Due to the complex geologic and hydrologic conditions at this facility a number of monitoring wells will have to be drilled in order to characterize the various units.

(*) The following unit RCRA regulated unit and is not to be included in the RFI: Land Treatment Unit.

CONCUR: Lydia M.Boada Clista DATE: December 9, 1987